



Demand Response in New England:

2002 Experience and Future Initiatives Under SMD

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Demand Response in ISO New England

- **Provide incentives for availability of guaranteed curtailment when reliability is threatened**
 - Diversifies the system “insurance policy” to help “keep the lights on”
 - Demand response may be the only resource available to the ISO in the short-run
- **Provide incentives for strategic management of customer on-site power use at times of high prices**
 - Promotes more balanced, competitive wholesale energy market
 - At the present time, barriers prevent consumers from making consumption decisions based on the market price of electricity



2002 Load Response Programs

- **Class I - Demand Response**
 - Emergency interruptible load program
 - End-use customers offer a guaranteed level of interruption
 - Customers must respond within 30 minutes to system reliability threat
 - Participating customers are eligible to receive capacity credit
 - Provide a payment based on the energy clearing price and congestion multipliers, or \$100/MWh, whichever is higher
- **Class II - Price Response**
 - A voluntary price response program where participants are paid the market price of electricity when they respond to an ISO notice
 - Notice is issued when market prices are forecasted to be \geq \$100/MWh
 - Allow 'low-tech' participation – notification by pager, e-mail, FAX

2002 Program Enrollment as of 9/26/2002



Contracted Amounts	New England		Southwest CT (52 Cities/Towns)		
	Customers	MW	Customers	MW	ECS MW
Totals	221	185	52	98	84
Demand (Class I)	77	112	39	91	84
Price (Class II)	144	73	13	7	N/A

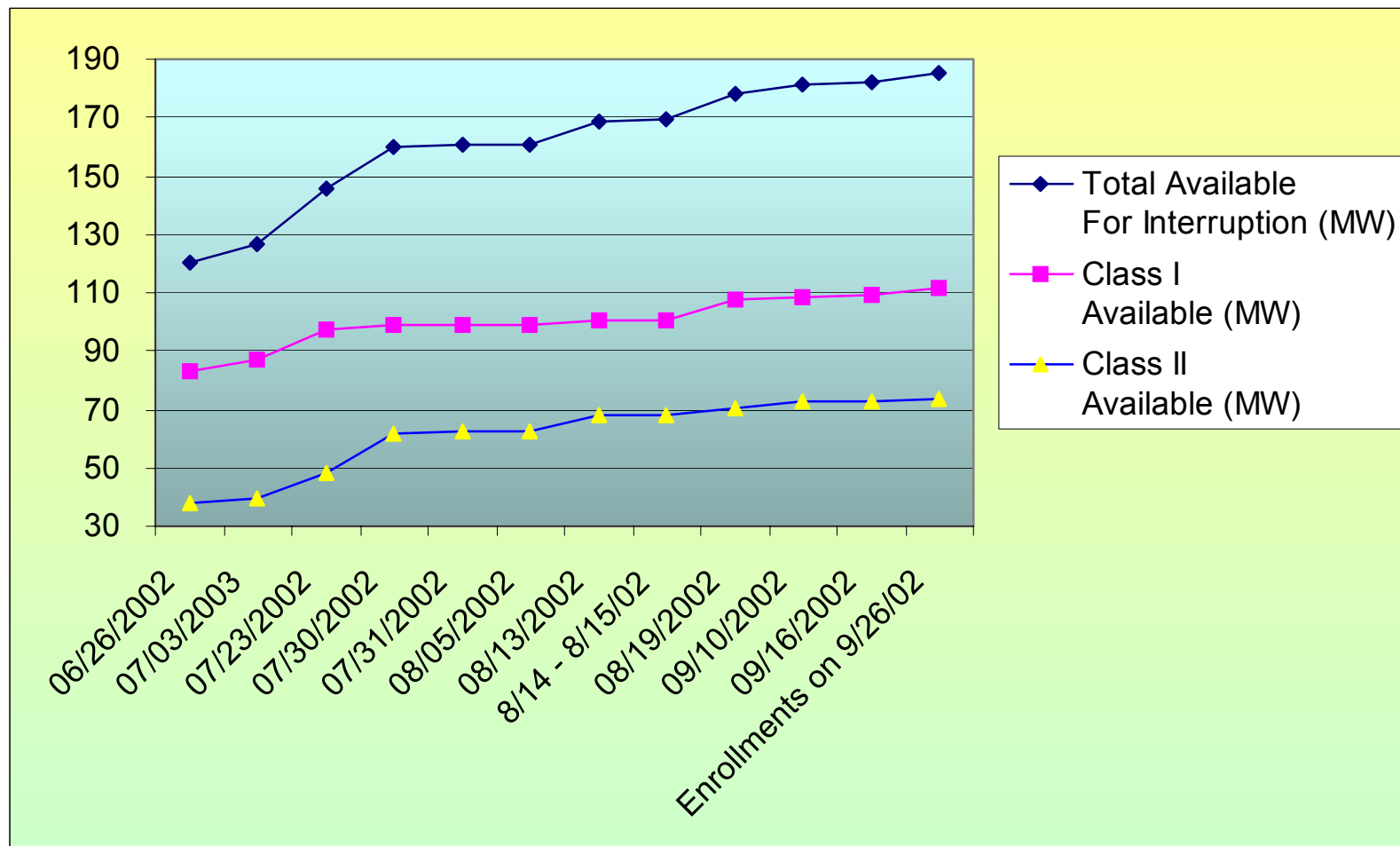
ECS = Emergency Capability Supplement, resources acquired by ISO New England to provide SWCT with needed planning and operating reserves

Class I demand reductions are triggered by OP-4, Action 12 – voltage reductions that take more than 10 minutes to implement

Class II customers are eligible for payment of voluntary demand curtailments once ISO-NE unit commitment analysis (or any periodic analysis update) forecasts a price of \$100/MWh or greater



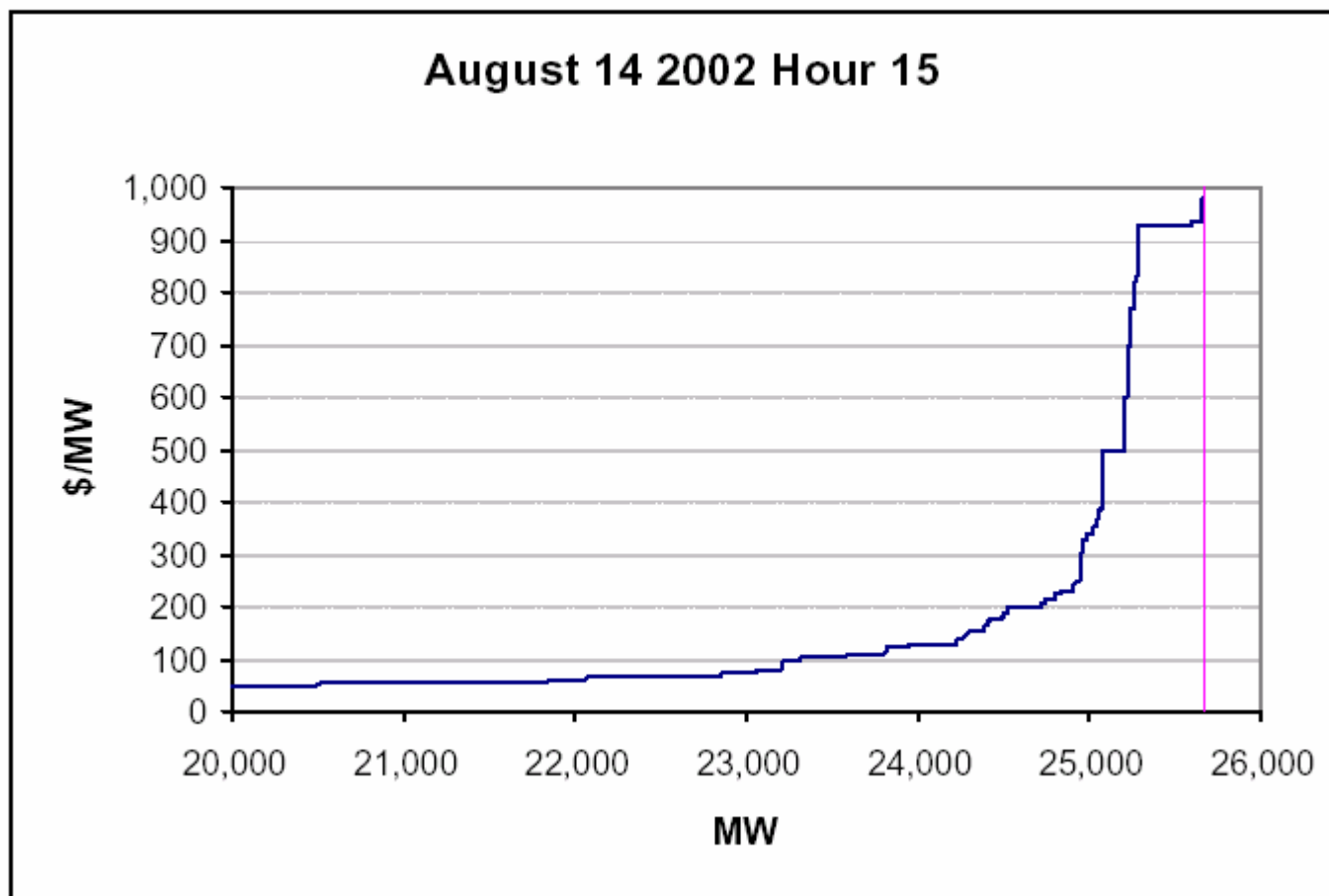
2002 Program Enrollment





Supply Curve for the Peak Hour in 2022

FIGURE 1 – Supply Curve for the Peak Hour



Preliminary Observations on Demand Response and Price



- **There were no Class I – Demand Response calls this past summer**
- **There were 12 days in which Class II – Price Response was triggered this past summer**
- **Energy clearing prices were relatively low. During the time the demand response program was in effect during the months of June, July, and August, prices exceeded:**
 - \$500/MWh in only 4 hours (all occurred on 14 August 2002)
 - \$200/MWh in only 8 hours
 - \$100/MWh in only 36 hours
- **A comprehensive independent evaluation of ISO-NE's 2002 program experience is being conducted at the present time**



Larger Program Menu for 2003

- **2002 Programs**
 - **Class I - Demand Response**
 - **Class II - Price Response**
- **2003 Programs**
 - **Day-Ahead Demand Response (new program)**
 - **Real-Time Demand Response – based on existing Class I emergency Demand Response program**
 - **30-Minute demand response**
 - **2-Hour demand response (new program)**
 - **Real-Time Price Response – based on existing Class II price response program**
 - **Can use internet-based communication system, or lower tech options (options that use email, pager, fax)**
 - **Low Tech: Hourly meter reads provided within 36 hours**
 - **Super Low Tech: Hourly meter reads provided after 36 hours (new program)**
 - **Real-Time Profiled Response (new program)**
 - **For non-interval metered loads**